



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,289	12/23/2003	Jang Hwan Cho	YHK-0110	7859
34610	7590	04/20/2006	EXAMINER	
FLESHNER & KIM, LLP			A, MINH D	
P.O. BOX 221200			ART UNIT	
CHANTILLY, VA 20153			PAPER NUMBER	
			2821	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,289

Applicant(s)

CHO JANG

Examiner

Minh D A

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 9 is/are rejected.
- 7) ☒ Claim(s) 2,3,5-8 and 10-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,4 and 9 are rejected under 35 U.S.C. 102(e) as being unpatentable by Lee et al (US 6,924,779).

Regarding claim 1, Lee discloses an energy recovering apparatus of a plasma display panel, comprising: said plasma display panel; a voltage source (Vs) for supplying sustain voltage to the panel; a first inductor (L1) for recovering an energy stored the panel into the voltage source (Vs); a second inductor (L2) for receiving an energy from the voltage source which the recovered energy has been stored to charge the received energy; and switching devices (S1-S3) for shutting off a path between the voltage source (Va) and the second inductor (L2) in a state in which energy has been stored in the second inductor (L2) to derive an inverse voltage into the second inductor (L2) and allowing the inverse voltage to be applied to the panel. See figures 2-4, col.2, lines [0022] to col.4, lines [0044].

Regarding claim 4, Lee discloses a first switch (S1) for forming a path between the voltage of the source and the panel such that said sustain voltage source is supplied

Art Unit: 2821

to the panel; a second switch (S2) for forming path among the panel, the first inductor (I1) and the voltage source (Vs) such that an energy from the panel recovered into voltage source; and a first diode (D1) connected between the second switch(S2) and the panel. See figures 1-3D.

Regarding claim 9, Lee discloses a plasma display panel, comprising the steps of: (A) supplying a sustain voltage from a voltage source (Va) to the panel; (B) recovering an energy stored the panel the voltage source using a first inductor (L1); (C) receiving an energy from the voltage source(Vs) which the recovered energy has been stored thereby charge the energy into a second inductor (L2); and (D) shutting off a path between the voltage source(Vs) and the second inductor (L2) in a state in which an energy has been stored in the second inductor (I2) using the switching devices to derive an inverse voltage into second inductor (I2) and applying said inverse voltage to the panel. See figures 2-4, col.2, lines [0022] to col.4, lines [0044].

Allowable Subject Matter

3. Claims 2-3, 5-8 and 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach that, wherein the voltage source includes:
a first voltage source connected between the panel and the ground voltage source; and

Art Unit: 2821

a second voltage source connected between the first voltage source and the ground voltage source recited in dependent claims 2 and 10.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Yoon et al (US 2004/0001290A1) and Kang (US 6,778,153) are cited to show an energy recovery circuit for plasma panel.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Art Unit: 2821

Examiner

Minh A

Art unit 2821

4/17/06



WILSON LEE
PRIMARY EXAMINER